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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/732,774	12/09/2003	Thomas Szolyga	200312966-1	6955

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EXAMINER

FRANKLIN, RICHARD B

ART UNIT PAPER NUMBER

2181

DATE MAILED: 05/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/732,774	<b>Applicant(s)</b> SZOLYGA ET AL.	
	<b>Examiner</b> Richard Franklin	<b>Art Unit</b> 2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 25-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 and 25-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

*Supervisory*  
FRITZ FLEMING  
PRIMARY EXAMINER  
GROUP 2100  
AUL 181  
5/21/2006

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1 – 23 and 25 – 27 have been examined.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/02/2006 has been entered.

#### ***37 CFR 1.131 Declaration***

3. The declaration filed on 05/02/2006 under 37 CFR 1.131 has been considered but is ***ineffective*** to overcome the US Patent Application Publication No. 2004/0042761 (hereinafter Miyazaki) reference.
4. The declaration is ineffective because of the following reasons:
5. The declaration does not contain an allegation that the acts relied upon to establish the date prior to the reference or activity were carried out in this country or in a NAFTA country or WTO member country (See MPEP 715.07(c)). The Declaration states that the conception of the invention was in the United States, but does not state that the inventor's diligence in constructively reducing to practice the invention was carried out in this country or in a NAFTA country or WTO member country.

6. Exhibit 1 includes copies of pages of the invention disclosure that was submitted before 3 June 2003 (Declaration Paragraph 2). Exhibit 1 includes 3 pages total and appears to include two copies of the same page. It is not clear how many pages were supposed to be included in Exhibit 1 or why the same page was submitted twice. For simplicity, the Examiner suggests that Applicant submit the whole invention disclosure that was submitted before 3 June 2003 to aid in simplicity.

7. Applicant states that Exhibit 1 shows expressly or impliedly each and every element of at least claim 26 (Declaration Paragraph 4). However, it is not shown in Exhibit 1 "a panel on which the capacity indicator is positioned." Exhibit 1 shows a 'Gas Gauge' Capacity Indicator and Activity Indicator, but do not show it positioned on a panel. The indicators are attached to a panel (Exhibit 1; Small PCB In Enclosure), but are not positioned on the panel. Therefore, every element of the claimed invention is not shown in Exhibit 1.

8. In the interest of compact prosecution, the evidence submitted to establish diligence has been reviewed. The evidence submitted is insufficient to establish diligence from a date prior to the date of reduction to practice of the Miyazaki reference to either a constructive reduction to practice or an actual reduction to practice. The statement of diligence (Declaration Paragraph 5) includes a critical time period (before 03 June 2003 to 25 September 2003) in which it is alleged that the invention disclosure

was prepared for release to Applicant's patent attorney. However, there are no specifics given as to what took place during that time period or why at least 16 weeks (3 months and 3 weeks) were spent preparing the invention disclosure for the patent attorney.

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1 – 23, 25 and 27 have been considered but are moot in view of the new ground(s) of rejection.

10. As per the argument to claims 1 - 23, 25, and 27, Applicant submits that neither US Patent No. 5,986,992 (hereinafter Bardmesser) nor US Patent No. 6,644,556 (hereinafter Adelman) teaches that the capacity indicator is observable while data is written to or read from the mass storage device because the mass storage devices are inserted into a slot on a computer system. The Examiner submits that although the mass storage device is inserted into a slot, the claim does not limit to a viewing point that is outside the computer system. Therefore, from a vantage point inside the computer system or inside the storage device slot, the capacity indicator is observable and implicitly taught by both Bardmesser and Adelman.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 11 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. Claim 11 recites the limitation "the desired storage capacity" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

The Examiner has interpreted the limitation to read "the determined storage capacity."

13. Claim 27 recites the limitation "the storage medium" in lines 6 – 10 of the claim. There is insufficient antecedent basis for this limitation in the claim.

The Examiner has interpreted the limitation to read "the mass storage device."

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 1 – 2, 4, 7 – 13, 15, 18 – 22, 25 – 27 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,644,556 (hereinafter Adelman).

As per claims 1 and 10, Adelman teaches a mass storage device (Figure 1 Item 100), the mass storage device including a panel (Figure 1 Item 112) on which a capacity indicator (Figure 1 Item 116) is positioned (Col 3 Lines 19 – 21) and observable while data is written to or read from the mass storage device (See argument to claim 1 above), the capacity indicator being operable to display either a used storage capacity or a free storage capacity of the mass storage device (Col 2 Line 62 – Col 3 Line 8; and a capacity-update component (Figure 2 Item 200) operable to determine the storage capacity of the mass storage device (Col 4 Lines 37 – 44) and to provide the determined storage capacity to the capacity indicator to be displayed (Col 4 Lines 44 – 47).

As per claims 2 and 13, Adelman also teaches wherein the mass storage device comprises a removable storage device (Figure 1 Item 100).

As per claims 4 and 15, Adelman also teaches wherein the capacity indicator comprises at least one light-emitting device (Figure 1 Item 118).

As per claims 7 and 18, Adelman also teaches wherein the capacity indicator comprises a liquid crystal display (Col 3 Lines 22 – 37).

As per claims 8 and 19, Adelman also teaches wherein the panel comprises a front panel of a housing containing electronics of the mass storage device (Col 3 Lines 19 – 21).

As per claim 9, Adelman also teaches wherein the mass storage device is adapted to receive capacity-update signals (Figure 3 Items 302 and 304) and wherein the capacity indicator is operable to display storage capacity or capacities responsive to the capacity-update signal (Figure 3 Items 304 and 306, Col 4 Lines 37 – 47).

As per claim 11, Adelman also teaches where the capacity indicator displays the determined storage capacity responsive to the determined storage capacity provided by the capacity-update component (Col 4 Lines 37 – 47).

As per claim 12, Adelman also teaches wherein the computer system comprises at least one input device and at least one output device coupled to the computer system (Col 3 Lines 14 – 18 “PDA”, “digital camera”, “notebook computer”).



As per claim 20, Adelman teaches indicating a storage capacity of a mass storage device (Figure 1 Item 100) comprising disposing a capacity-update component (Figure 2 Item 200) in the mass storage device; determining, with the capacity-update component, a storage capacity of the mass storage device (Col 4 Lines 37 – 47); providing the determined storage capacity to a capacity indicator (Figure 1 Item 116) of the mass storage device, wherein the capacity indicator is observable while data is written to or read from the mass storage device (See argument to claim 20 presented above); and displaying an indication of the determined storage capacity (Col 4 Lines 37 – 47).

As per claim 21, Adelman also teaches wherein determining a storage capacity of the mass storage device comprises determining a used capacity of the mass storage device (Col 2 Line 62 – Col 3 Line 8).

As per claim 22, Adelman also teaches wherein displaying an indication of the determined capacity comprises displaying the determined capacity as a percentage of an overall storage capacity of the device (Col 2 Line 62 – Col 3 Line 8).

As per claim 25, Adelman also teaches determining the storage capacity of the mass storage device comprises periodically determining the capacity (Col 4 Lines 31 – 62).

As per claims 26 and 27, Adelman teaches a mass storage device (Figure 1 Item 100) comprising a capacity indicator (Figure 1 Item 116) observable while data is written to or read from the mass storage device (See argument to claim 27 as presented above), and operable to display a used storage capacity of the storage device or storage medium (Col 2 Line 62 – Col 3 Line 8), or a free storage capacity of the storage device or storage medium (Col 2 Line 62 – Col 3 Line 8) and a panel (Figure 1 Item 112) on which the capacity indicator is positioned (Col 3 Lines 19 – 21).

15. Claims 1 – 2, 4 – 5, 7, 9 – 12, 15 – 16, 18, 20 – 21, and 26 – 27 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Application Publication No. 2003/0227451 (hereinafter Chang).

As per claims 1 and 10, Chang teaches a mass storage device (Figure 1 Item 100) operable to store data and having an overall storage capacity (Paragraph [0016]), the mass storage device including a panel on which a capacity indicator is positioned and observable while data is written to or read from the mass storage device (Figure 1 Item 10, Paragraph [0016]), the capacity indicator being operable to display a free storage capacity of the mass storage device (Paragraphs [0017] and [0020]); and a capacity-update component (Figure 1 Item 20) operable to determine the storage capacity of the mass storage device and to provide the determined storage capacity to the capacity indicator to be displayed (Paragraph [0017]). Chang teaches where the mass storage device is coupled to a computer system (Paragraph [0016]).

As per claims 2 and 13, Chang also teaches wherein the mass storage device comprises a removable storage device (Figure 1 Item 100, Paragraph [0016]).

As per claims 4 and 15, Chang also teaches wherein the capacity indicator comprises at least one light-emitting device (Figures 3 and 4 Item 10', Paragraph [0019]).

As per claims 5 and 16, Chang also teaches wherein the light-emitting device is a light-emitting diode (LED) (Paragraph [0019]).

As per claims 7 and 18, Chang also teaches wherein the capacity indicator comprises a liquid crystal display (Figure 1 Item 10, Paragraph [0016]).

As per claim 9, Chang also teaches wherein the mass storage device is adapted to receive capacity-update signals and wherein the capacity indicator is operable to display storage capacity or capacities responsive to the capacity-update signal (Paragraph [0017]).

As per claim 11, Chang also teaches where the capacity indicator displays the determined storage capacity responsive to the determined storage capacity provided by the capacity-update component (Paragraph [0017]).

As per claim 12, Chang also teaches wherein the computer system comprises at least one input device and at least one output device coupled to the computer system (Paragraph [0016] "read/write device", "PDA").

As per claim 20, Chang teaches indicating a storage capacity of a mass storage device (Figure 1 Item 100) comprising disposing a capacity-update component (Figure 1 Item 20) in the mass storage device; determining, with the capacity-update component, a storage capacity of the mass storage device (Paragraph [0017]); providing the determined storage capacity to a capacity indicator (Figure 1 Item 10) of the mass storage device, wherein the capacity indicator is observable while data is written to or read from the mass storage device (Figure 1); and displaying an indication of the determined storage capacity (Paragraph [0017]).

As per claim 21, Chang also teaches wherein determining a storage capacity of the mass storage device comprises determining a used capacity of the mass storage device (Paragraph [0017]).

As per claims 26 and 27, Chang teaches a mass storage drive (Figure 4 Item 100) for connecting to a storage medium (Figure 4 Item B) and a mass storage device (Figure 1 Item 100) comprising a capacity indicator (Figure 1 Item 10, Figure 4 Item 10') observable while data is written to or read from the mass storage device, and operable

to display a used storage capacity of the storage device or storage medium (Paragraph [0017]), or a free storage capacity of the storage device or storage medium (Paragraphs [0017] and [0020]); and a panel on which the capacity indicator is positioned (Figures 1 and 4).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 3, 5 – 6, 14, 16 – 17, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,644,556 (hereinafter Adelman) in view of US Patent No. 6,714,724 (hereinafter Cook).

As per claims 3 and 14, Adelman teaches a mass storage device with a capacity indicator (see rejection of claims 1 and 10 above).

Adelman does not teach wherein the removable mass storage device comprises a removable hard disk.

However, Cook teaches wherein the removable mass storage device is a hard disk (Cook; Figure 4 Item 74, Col 7 Lines 51 – 53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Adelman to include the

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hard disk because doing so allows the device to be moved to any desired location

(Cook; Col 7 Lines 51 – 53).

As per claims 5 – 6, 16 – 17, and 23, Adelman teaches a mass storage device

with a capacity indicator (see rejection of claims 1 and 10 above).

*PM 5/21/2006* ~~Adelman~~  
~~Chang~~ does not teach wherein storage capacity indicator comprises an LED and where the LED has a plurality of different colors.

However, Cook teaches wherein the storage capacity indicator LED has a plurality of different colors (Cook; Col 6 Lines 46 – 54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Adelman to include the plurality of colors and LED because doing so allows for better storage capacity indication (Cook; Col 6 Lines 46 – 54).

17. Claims 3, 6, 14, 17, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. 2003/0227451 (hereinafter Chang) in view of US Patent No. 6,714,724 (hereinafter Cook).

As per claims 3 and 14, Chang teaches a mass storage device with a capacity indicator (see rejection of claims 1 and 10 above).

Chang does not teach wherein the removable mass storage device comprises a removable hard disk.

However, Cook teaches wherein the removable mass storage device is a hard disk (Cook; Figure 4 Item 74, Col 7 Lines 51 – 53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Chang to include the hard disk because doing so allows the device to be moved to any desired location (Cook; Col 7 Lines 51 – 53).

As per claims 6, 17, and 23, Chang teaches a mass storage device with a capacity indicator (see rejection of claims 1 and 10 above). Chang also teaches wherein the mass storage device includes a plurality of LEDs (Chang; Figures 3 and 4 Item 10').

Chang does not teach wherein the plurality of LEDs has a plurality of different colors.

However, Cook teaches wherein the storage capacity indicator LED has a plurality of different colors (Cook; Col 6 Lines 46 – 54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Chang to include the plurality of colors because doing so allows for better storage capacity indication (Cook; Col 6 Lines 46 – 54).

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Franklin whose telephone number is (571) 272-0669. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fritz Fleming can be reached on (571) 272-4145. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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5/11/2006